

SIEMENS

ACUSON Sequoia

US

Replacement of Parts System

Sequoia Elastomer replacement

**Siemens Medical Solutions
Ultrasound Division**

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English

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Overview

This document provides instructions for replacing the elastomer of a User Interface Assembly on the ACUSON Sequoia™ ultrasound system.

Replacing the elastomer corrects the problem of sticky or unresponsive keys on the ultrasound UI keyboard.

Time Required

Elastomer replacement: approximately 1 hour

Tools Required

Tab. 1 Required tools to complete Sequoia Elastomer Replacement

Description	Qty
Standard CSE Toolkit	1

Parts

User Interface Elastomer Repair Kit

Tab. 2 User Interface Elastomer Repair Kit

Kit Description	Qty	Part No.
Service Elastomer Repair Kit, Sequoia	1	08270240

Tab. 3 User Interface Elastomer Repair Kit Contents

Description	Qty
L/R, U/D Elastomer	1
Main Elastomer	1
TEQ Elastomer	1

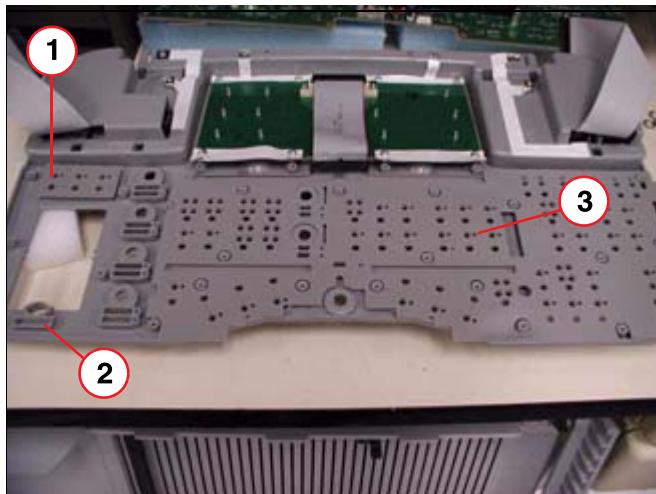


Fig. 1: Sequoia Elastomer Descriptions

- Pos. 1 L/R, U/D Elastomer
- Pos. 2 TEQ Elastomer
- Pos. 3 Main Elastomer

Installation

To replace the ACUSON Sequoia Elastomer:

Remove the UI Assembly from the System



Observe Electrostatic Discharge (ESD) Procedures

⇒ Failure to comply will cause damage to the Assembly
and will result in an additional service call.

1. Turn off power.
2. Remove the **CINE** knob.
3. Remove user interface bezel screws. (x11)
4. Lift keyboard bezel four to six inches (10 to 15 cm).
5. Disconnect kidney pad wiring from keyboard bezel. (x2)

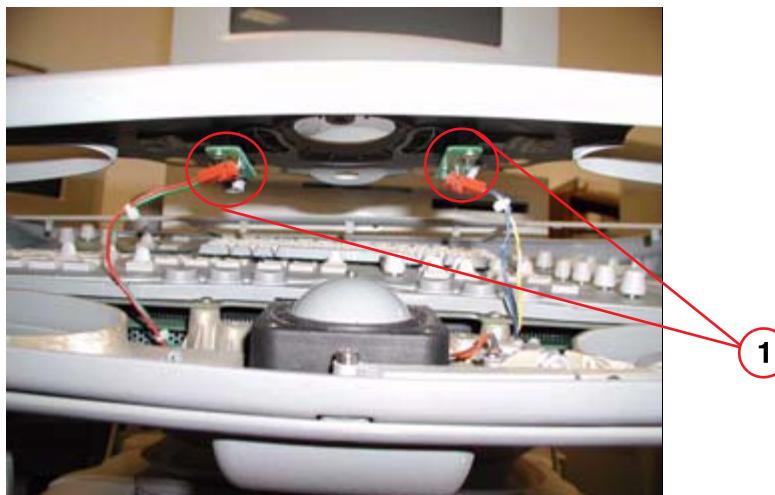


Fig. 2: Sequoia User Interface kidney pad wirings
Pos. 1 Kidney Pad Wirings

6. Remove keyboard bezel.



Fig. 3: ACUSON Sequoia keyboard bezel

7. Raise user keyboard and monitor to maximum height.
8. Push the Sequoia name plate off to expose the mounting screw for the MO disk housing front cover.
9. Remove the MO disk housing front cover mounting screw.
 - Grasp the MO housing by the top corners, and pull forward from the top.
 - Pull up to remove it from the Sequoia system. The front cover is still retained by two spring clips so some force will be required

Prepare the UI Assembly for elastomer replacement

1. Remove screws securing user interface assembly to system chassis. (x10)
2. Tilt front of user interface up.

3. Disconnect trackball cable and trackball function switch cable from the FPP.

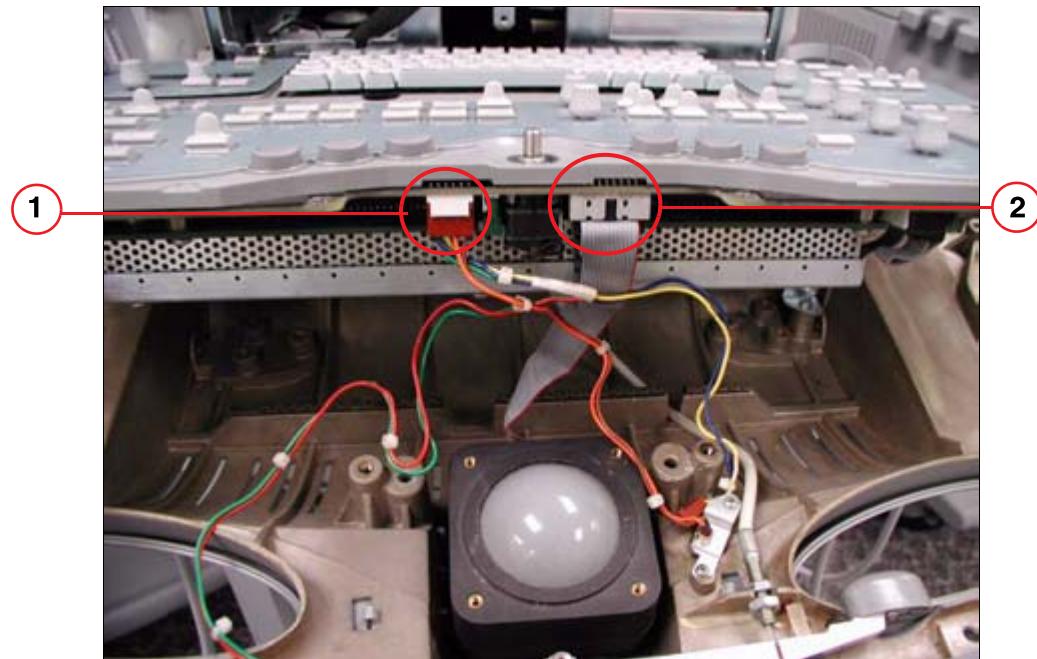


Fig. 4: Trackball cables

Pos. 1 Trackball Cable
Pos. 2 Trackball function switch cable

4. Disconnect cables from rear edge of the FPP.

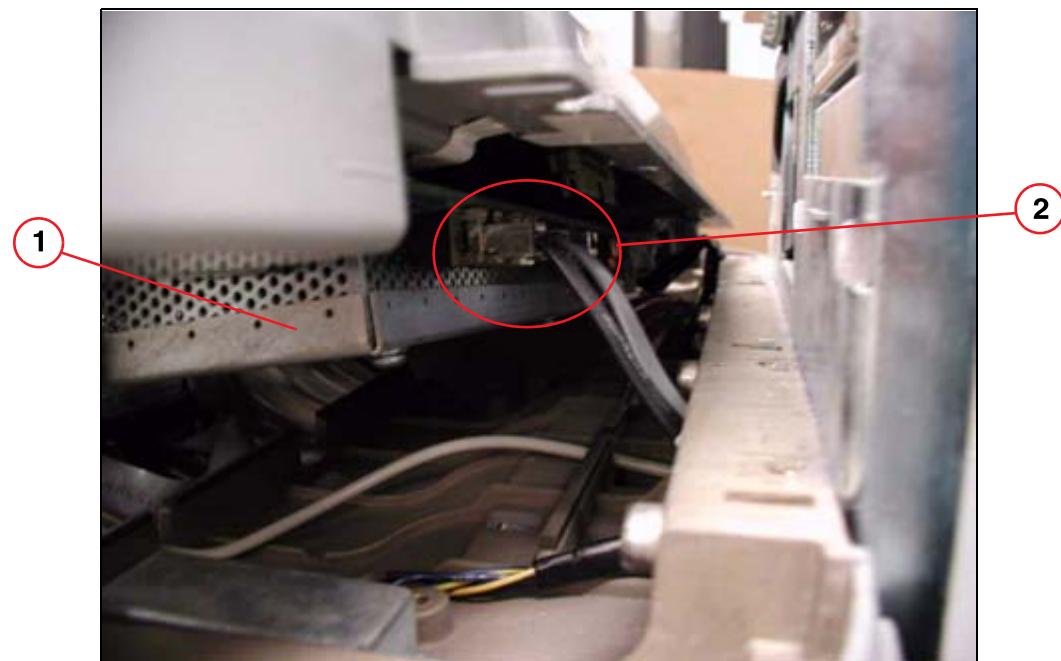


Fig. 5: View from behind Sequoia monitor

Pos. 1 FPP
Pos. 2 RJ12, RJ45, FPP, and Power cables

5. Lift user interface clear of chassis.
6. Turn user interface over (knobs/buttons down).
7. Remove screws securing the FPP to switch assembly.

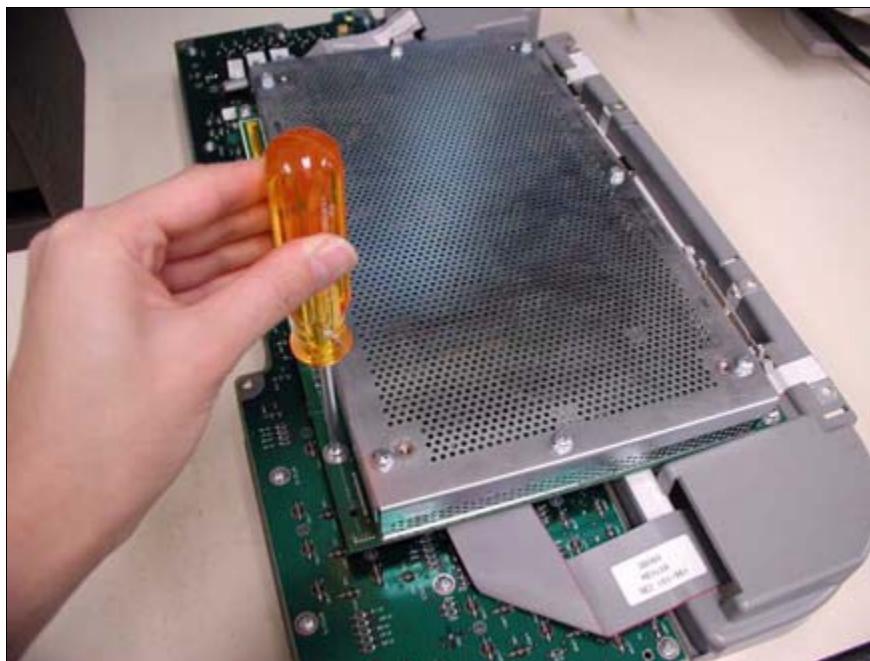


Fig. 6: FPP and Switch Assembly

8. Carefully but firmly separate the FPP from the switch assembly. The two assemblies are joined by four 80 pin connectors.
9. Remove the DGC caps by placing a flathead screwdriver underneath each cap and gently pushing upward.
10. Remove the DGC bezel by placing a flathead screwdriver underneath the bezel and gently pushing upward.
11. Remove the seven plastic encoder knobs by gently pulling upward.
12. Remove the UI overlay.
13. Using a 1/2-inch or 13 mm hollow shaft socket, remove the mounting nut from the encoder.
14. Turn the UI assembly over.
15. Remove all 31 screws holding the UI board in place.
16. Remove the UIP UDC ribbon cable, J5 ribbon cable, and UPD UDQ ribbon cable from the UI board.
17. Lift each of the seven rotary encoders and its crown washer out of the UI assembly.

NOTE

It is important to mark each encoder ribbon cable with the location number that can be found near the connector base i.e. J9, J10.

18. Carefully lift the UI board and set aside

NOTE

Grounding straps may tear if not carefully removed.

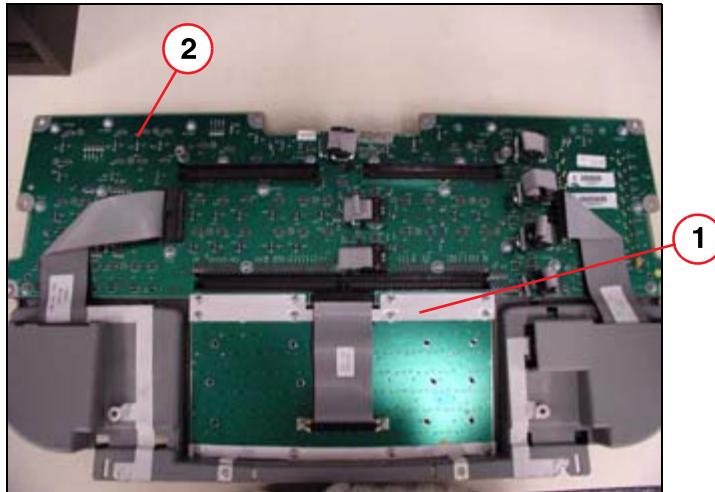


Fig. 7: Sequoia UI Board descriptions

Pos. 1 Grounding strap

Pos. 2 UI Board

19. Remove the elastomer.

NOTE

The elastomer comes in three separate sections.

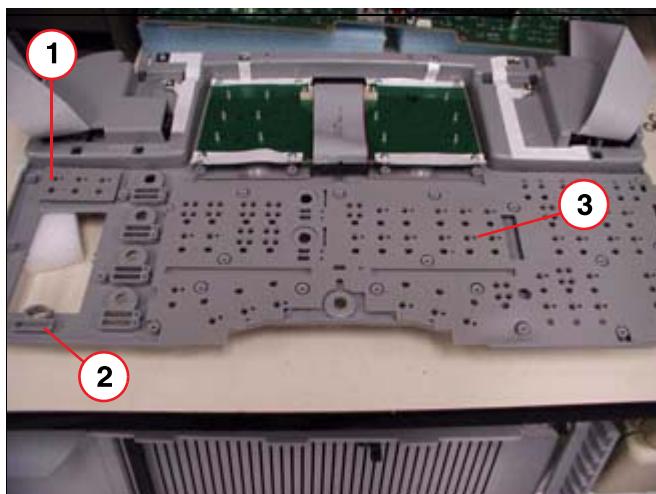


Fig. 8: Sequoia Elastomer Descriptions

Pos. 1 L/R, U/D Elastomer

Pos. 2 TEQ Elastomer

Pos. 3 Main Elastomer

20. Clean the UI console area with a soft cloth.

NOTE

Clean thoroughly. Excess debris is one cause of sticking keys.

Replace Elastomer

1. Replace elastomer and verify that the plastic pegs on the UI assembly and the holes in the elastomer align.

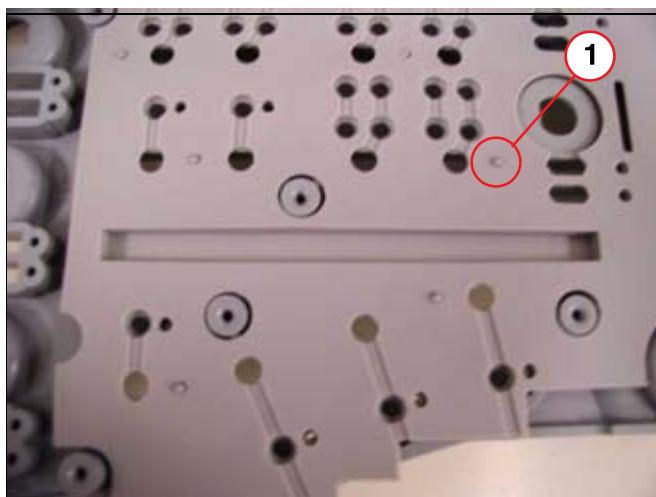


Fig. 9: Sequoia Elastomer Alignment
Pos. 1 Elastomer Alignment marker

2. Carefully replace the UI board onto the elastomer, ensuring that the pegs of the UI assembly align with the holes on the UI board.

NOTE

Be careful not to move the aligned elastomer underneath.

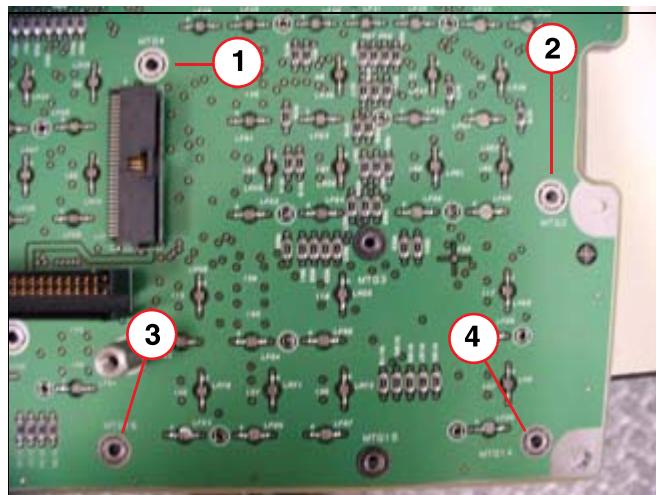


Fig. 10: UI Assembly Alignment Pegs

- | | |
|--------|-----------------------------|
| Pos. 1 | UI Assembly alignment point |
| Pos. 2 | UI Assembly alignment point |
| Pos. 3 | UI Assembly alignment point |
| Pos. 4 | UI Assembly alignment point |

3. Reverse steps for installation.

CAUTION

The mounting nut should be installed by holding the 1/2 inch (or 13 mm) socket with fingers only. Do not use a ratchet.

⇒ **Over-torquing the nut can crack the glass encoder wheel.**

Configuration

Once the system has been reassembled:

1. Boot system to SUI.
2. Select UI diagnostics in the service diagnostics menu.
3. Verify user interface passes the following tests:
 - Keyboard
 - LCD
 - LED

Administration

Complete all paperwork as required by the regional office.

